

## 2. INTERIOR MATERIALS

---

### A. CONCRETE

#### 1) Background

The original Capitol plans do not call for a full basement. However, sometime during construction, it was decided to excavate deeper to achieve a full basement, although the floors on the west are lower (and the rooms taller) than those on the east. The floors in the basement are mostly painted concrete, as are the exposed footings, posts and beams. These are not seen by the public, although the some government staff workers and volunteers use the basement during legislative sessions.

A type of cementitious flooring called “asbesticite” was used in such major rooms as the House and Senate Chambers, as well as in offices on all four main floors. Old photos show that is looked like smooth concrete, scored in large squares, perhaps 6 by 6 feet or 8 by 8 feet each, painted with “two coats of cement paint” and intended to look like finely cut stone. This flooring is now concealed under raised wood-frame, and plywood floors covered with newer carpeting, and in the offices, older carpeting. The old flooring can be seen by pulling up corners of the newer flooring.

Exposed concrete is not found anywhere in the main four levels of the interior.

#### 2) Analysis

Concrete is not an important, character-defining material in any of the habitable areas of the four main floors. The “asbesticite” is of concern as a possible health hazard.

#### 3) Recommendations

To the extent the basement may continue to be used for habitable space in the future, exposed concrete should be painted to soften its edges and appearance and reduce the collection of dust.

In areas where asbesticite flooring is disturbed during renovation, it should first be removed by certified hazardous materials abaters.

### B. STONE

#### 1) Background

A variety of local and imported stones sheath the walls and ceilings and provide much of the architectural ornament in the rotunda and grand mezzanine areas, as well as in some of the major public chambers and rooms. The types and placements of these stones are documented elsewhere (see IX. A. 1. c. and d. and IX. G. 3.). Some of the more prominent uses of stone include Georgia marble for the floor, columns, walls, stairways, balustrades, arches and ornament in the rotunda and mezzanine areas, Birdseye marble in the Gold Room, House and Supreme Court Chambers, travertine or onyx in the Senate Chambers and front entry vestibule, and Sanpete oolite or limestone as wall and post sheathing on the ground floor.

Not actually stone but appearing to be stone is the Scagliola, an “artificial marble” made of from Keene Cement and used sparingly in places like fireplace surrounds and mantels.

## 2) Analysis

The interior stone is mostly intact, unaltered and in good to excellent condition. Most damage is minor and the result of normal wear and tear. For example, some of the lower, mitered corners of posts and walls have experienced minor chipping. Small pieces also have chipped off the noses of a few stair treads.

The light cream or tan-colored Sanpete oolite is a plain, unpatterned, flat material and has been painted, possibly fairly early in the building's history. It may have been painted because it is quite absorbent and would soil easily. Also, it did not polish up well, nor did it have the attractiveness of the stones used on the upper floors. Painting the oolite did not change its appearance significantly, but did enhance its wearability and cleanability.

The other stone (marble, travertine, onyx, et al) was meant to be exposed, smoothed and polished in most locations, the rotunda floor being an exception. All of the non-oolite stone and Scagliola retains its original finish and appears quite clean.



The interior stone is a major character-defining feature of the Capitol and is a high priority for preservation. Original architectural plans show the metal connectors used to secure the ornamental stone in place. To the extent these connections are not sufficient to withstand damage and falling during a seismic event, they may need to be re-engineered and strengthened, necessitating the temporary removal and storage of some stone.

## 3) Recommendations

Preserve the original interior stone. Keep it clean and in good repair prior to renovation. Repairing minor, harmless chips is not necessary. Repair larger chips and damage with matching material and use matching Dutchmen when replacing major pieces. Also retain and protect the Scagliola. Because it is a thin cement veneer rather than actual stone, it is more easily damaged and needs extra protective care.

During renovation, where areas of stonework must be removed temporarily to strengthen connections or install shear walls and infrastructure, salvage and store the stone for reinstallation later,

following the provisions in section IX. D.4.

Since the Sanpete oolite may always have been painted, it is appropriate to again paint it during the renovation. Follow the original color schemes presented section X. Where stone-sheathed posts are free-standing in public areas, conduct further testing to determine whether the stone was originally exposed naturally or varnished, painted or otherwise finished with a coating.

---

## C. TILE

### 1) Background

Ceramic tile flooring is found in public areas throughout the building. White hexagonal tiles, 1-1/4" across, form the primary flooring for corridors at the first, third and fourth floors. Border tiles are gray and white, 3/4" square. While the border at the first floor uses a simple striped motif, that at the upper floors incorporates a more decorative fretwork pattern. The first floor toilet rooms and adjacent corridor feature an all-over striping of dark gray, light gray and white. These tiles are a full 1" square - larger than the border tiles used elsewhere in the building. This size difference, and the presence of a rolled, rather than a square edge, indicates a tile of more recent vintage. These striped floors are most likely a mid-century alteration.

### 2) Analysis

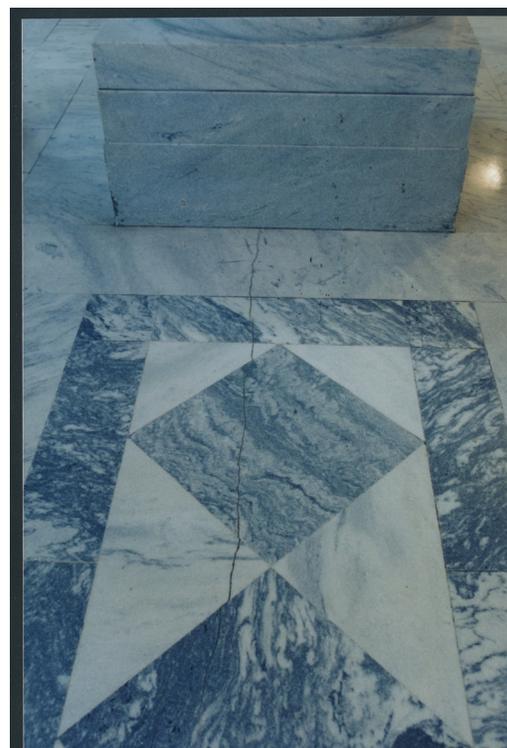
The most common tile deficiency, observed throughout the building, is cracking. Through-cracks quite regularly cross most of the tile floors, running through tiles and grout joints alike. The most likely cause of the cracking is movement of the floor and tile substrate.

### 3) Recommendations

The large cracks that striate the floors, especially on the first floor, should be patched. If areas that are currently tiled have in the past or will be disturbed during the rehabilitation, consider salvaging the tile from these areas as replacements. To remove tile from its substrate, soak in a 20-30% muriatic acid solution, testing first to determine the reaction of the tile to the acid, and to achieve the optimum strength and dwell time.

Another option is to purchase new replacement tile. Since the original tile has square edges and most modern tile has rolled edges, this would be a custom product. If custom tiles are produced, more tile than is necessary for the current work should be fabricated and kept as "attic stock" for future repairs.

The tile repair should also address the cause of the cracking. The anticipated structural retrofit may lessen the movement that has caused the cracking up to this time. Expansion joints may be necessary to eliminate future cracking entirely; however, it may be aesthetically more appropriate to live with some cracking, particularly if replacement tiles are available, than to break the expanse of tile with expansion joints.



## D. PLASTER

### 1) Background

The original drawings and recent examinations show that much of the interior ornament is painted or gilded plaster. Using plaster planes with classical profiles, and prefabricated sections containing rows of egg and dart, dentils, crowns and other motifs of antiquity, cornices, pediments, friezes, cartouches, statuettes and other decorative elements were added liberally to many of the Capitol's rooms. Even the perimeter offices received fancy cornices, while the ornament in the major legislative and court spaces consisted of flamboyant plaster work. Much of the projecting work is secured with metal wires and mesh, while heavier cantilevers have some reinforcing bar, accordingly to the original plans.

Walls and ceilings were also plastered with rough "brown" coats and smooth skim coats applied to the ribbed sides of underlying hollow clay tile. Some walls and ceilings, however, were covered with painted "book cloth". Walls and ceilings repaired during later remodelings were plastered and painted. The curved ceiling of the dome is plastered, as are the curved and heavily molded ceilings of the House, Senate and Supreme Court Chambers. The curved ceilings above the now-lowered ceilings of the Auditor's and Treasurer's offices are likely plastered. Painted and gilded plaster ornament is used very expressively in the Gold Room, and to a lesser extent in the Governor's suite of rooms.

### 2) Analysis

The Capitol's plaster ornament gives the interior much of its beauty and elegance. It has been preserved in the major public spaces, although repainted non-original colors in the House Chambers. In nearly all of the perimeter rooms, original plaster cornices have been hidden above lowered ceilings. Many of the cornices have been badly damaged by those running newer electrical, plumbing and heating/cooling ducts above the suspended ceilings.

Records indicate that when plaster walls and ceilings experienced cracking due to building movement, they were sometimes replaced or covered with painted gypsum board rather than replastered. This occurred, for example, in the Central Hall. The new finishes are the same or so similar as to defy detection, once painted white. Some of the others have been painted non-original colors.

### 3) Recommendations

As part of the overall restoration, repair, replace and/or refinish all plaster walls, ceilings, cornices, trim and ornament that has been damaged by general wear, previous alterations, or the new renovation/restoration. Carefully document (measure, photograph, harvest samples) existing work prior to its alteration or demolition. Apply the original or period finishes as documented in this study, or as determined by further study. Use historical photos to determine the design of areas previously altered or destroyed. In areas where the original floor plans, walls and ceilings are being restored, restore the original cornices and coved ceilings that were left behind when earlier walls were removed, and are now covered above lowered ceilings. The overall intent should be to return plaster surfaces to their original appearances insofar as practical.

---

## E. FABRIC

### 1) Background

Sewn fabric is a rarity in the Capitol and is limited mainly to the Gold Room. The flower and lion-patterned fabric in the ornamental frames on the walls is a tapestry or brocade made in France at a cost of \$12/square foot. The lace curtains made for the fore windows (now missing) were made in Florence, Italy and are known as “Florentine curtains.” When the Gold Room was remodeled in 1956 using “original paint colors,” there was considerable discussion about the price of duplicating the original “Elizabeth Velvet” draperies and fringe. Work of an unknown nature may have affected the fabrics during later Gold Room renovation during the 1960s-80s.

The murals in the House and Senate Chambers, in the lunettes in the Central Hall, and at the base of the dome of the rotunda, are technically pieces of fabric. They are oil painted canvas, glued to the walls. The murals, which date from 1915 to the mid-’30s, have been cleaned at various times beginning in 1947.

We determined through examination that some of the ceilings and walls, and perhaps most of them originally, were covered with a heavy wall fabric resembling painted canvas. A historical reference mentions that some of the office walls were covered with “book cloth,” which may be the material we are seeing. It was glued to the plaster surfaces like wallpaper, then painted thickly to resemble painted plaster.

### 2) Analysis

The fabric in the Gold Room remains but some has faded due to ultraviolet light, and sagged, torn slightly and shown other signs of distress due to material fatigue and touching. The fabric is an important element of the interior architecture of one of the most significant and oft-viewed and used rooms in the Capitol. Architectural fabric is a rare and delicate material and its preservation is a high priority.

The painted wall and ceiling fabric or “book cloth” has been much disturbed, covered or removed. It will receive additional damage in the future renovation. Compared to the decorative fabric, it is not a distinguished or particularly character-defining feature.

### 3) Recommendations

Follow the preservation recommendations in Wilson Martin’s July, 1994 “Gold Room Report.” The report calls for the preservation of the original fabric by a qualified fabric conservator. Information on several candidate conservators is contained in the rear section of the report.

Since the wall fabric was merely an underlayment for wall and ceiling paint and it is not easily distinguished from conventional painted plaster, and the balance of it will likely be greatly damaged during renovation, we do not recommend special care in its preservation. Where it exists in good conditions and does not need to be disturbed, it may well remain and be repainted original colors.

During renovation, protect the oil-painted canvas murals from damage. This may entail removing, storing and later reinstalling them. In so doing, we recommend this work be done by a mural conservator such as Brooke Bowman of Alaska, who removed, stored and reinstalled the panoramic Lynn Faucett mural in the visitor center at “This is the Place” State Park.

## F. METAL

### 1) Background

Non-structural interior metals occur throughout the building and include the following: railings, grilles, staircases, light fixtures, doors, windows, hardware (see hardware section, below) and signage. Metal types include cast iron, used for staircases and railings; ferrous (iron-containing) sheet metal, used for hollow metal doors and frames; cast bronze or brass cuprous metals, used for light fixtures, grilles, signage and special decorative features; and cast aluminum, used at secondary entry doors and frames and at non-original windows. While the building features both original and modern metals, this section will focus on original features.

The following discussion uses the term “cuprous” to apply to any yellow, brown or green-colored, non-magnet reactive metal. These metals are assumed to be copper-containing. The darker-hued examples are probably bronze (an alloy of copper and tin). Lighter-colored metals are generally assumed to be brass (an alloy of copper and zinc). Laboratory analysis is required to positively identify the alloy.

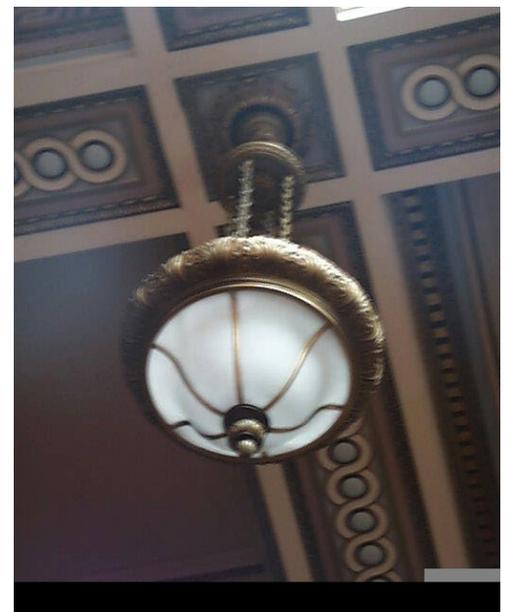
- a) Railings: Decorative 29 3/4" high guardrails ring the galleries of both the Senate and House of Representative. The Senate gallery railing consists of consisting of square-section verticals separated by circles. Centered at each panel are wreath-encircled medallions, centered within each medallion alternate the letter “U” and a beehive. A round-section brass handrail rail tops the feature. The railing at the House of Representatives is cast iron with centered cast cuprous acanthus leaf ornament. Again, the beehive motif is featured at the center of each acanthus medallion.
- b) Stairs: Cast iron staircases provide vertical circulation between all floors. With the exception of the marble main staircases connecting the second and third floors, all original staircases are cast iron. The staircases feature cast iron stringers and risers with marble treads, and cast iron railings surmounted by wooden handrails. All staircase railings consist of square-section cast iron bars. Decorative brackets connect the stringers to the railings; their attachment at the stringers feature rosettes. The railing at the stairs from the Rotunda to the first floor features gold-painted cast iron medallions at the center of each railing section, ornamented by laurel wreaths surrounding a beehive-centered shield.
- c) Grilles: Original ventilation grilles are cast cuprous metal, probably bronze, featuring square holes. Original grilles such as these occur at the Senate chamber, beneath the gallery. Modern anodized aluminum grilles are very common throughout the building. These feature a semi-circular motif similar to that at the cast iron staircase risers.



- d) Doors and Frames: Metal doors and windows occur throughout the building. Interior doors and frames, including original interior window frames, are hollow ferrous sheet metal, with a faux-wood, grained finish. The doors are single panel; most of the panels are obscure glass (see glass section, below). Frames are approximately four inches wide, and feature a simple profile at both the inner and outer edges.

e) Light fixtures: Original light fixtures in the public spaces are cast metal and glass. On the first floor, the fixtures feature painted cast iron bases with round glass globes. Above that floor, the fixtures are cuprous; most appear to be made of cast polished brass. These fixtures are also more ornate than those at the first floor. In addition to the large chandelier over the rotunda, light fixtures variably include the French chandelier sconces in the Gold Room, eagle-topped lights surmounting the main staircase newel posts, circular lights at the base of each of the skylight ribs, and bronze light standards at the entry to the House of Representatives.

f) The Capitol contains both original and retrofit door hardware. In major public spaces, such as the Senate Chambers and the Governor's suite, retrofit lever hardware consists of beehive-motif levers mounted on flat plates with double-incised edges. Original interior door hardware includes 2-1/2" diameter knobs on 3" X 8-1/2" backplates. Both knobs and plates have a raised rim. The backplate enclosed by the rim has a stippled finish. While most of these have a dark bronze finish, a nickel finish unit was observed in the first floor women's rest room. Additional original interior door hardware includes ball-capped hinges and Russwin door closers. Retrofit hardware at secondary spaces features simple levers and rose-mounts centered on flat plates with a single incision at the edge.



## 2) Analysis

All interior hardware is in good condition. The aluminum exterior hardware is also in good condition. The cuprous hardware at the main entry shows signs of wear.

## 3) Recommendations

Preserve, repair, and reuse these components in situ. Carefully remove, salvage and store any components that must be removed. Fully utilize alternative standards available under the Americans With Disabilities Act to preserve historic doors which do not meet current disabled access standards. This may include modifications such as installing lever adapters which retain the historic round knobs.

## Signage and Miscellaneous

### a) Background

Original metal signage includes the applied bronze lettering at the entries to the House of

Representatives and the Supreme Court. These large capital letters, surface mounted onto the marble wall substrate, relate to both the Art Nouveau style, and to the architectural lettering common during the period (especially with the broad serifs and high horizontal strokes).

Miscellaneous metal features include outlets for the pneumatic vacuum cleaning system, which consist of cuprous cover plates set into the marble bases, and the bronze Newman Clock Co. cover plate, 3 7/8" by 5 1/8" at the east end of south side, second floor.

#### b) Analysis

Interior metals, protected from weather, are in good condition. The grained, hollow metal doors and frames are prone to denting and scratching, but little of this type of damage was observed.

#### c) Recommendations

Since the interior metals are in such good condition, these recommendations focus more on maintenance than repair.

The best protection for ferrous metals is paint; these metals should remain painted. If excessive paint build-up is obscuring detail, or if rust is discovered, then the element should be stripped to bare metal, primed with a coating recommended for ferrous metals, and then repainted. For cast iron, mechanical abrasion, including blast-cleaning and wire-brushing, is the recommended cleaning procedure. Dry chemical processes, such as *Peal-away*, may be used where blast cleaning is not feasible because of adjacency to softer materials, public accessibility, or toxic issues.

The hollow metal doors and frames are in good condition. The recommendation here is to continue to use these features, and to have a qualified decorative painter perform any needed upkeep on the grained finish.

## G. GLASS

### 1) Background

There are three types of obscure wire safety glass used as interior glazing. The apparent original, and still the most common, is that featuring an all-over linear pattern. This pattern, known as "Florentine," was manufactured by the Mississippi Glass Co., and is no longer available. A second type, observed on some doors and a probable mid-20<sup>th</sup> century replacement, features a stippled pattern. Finally, a recent replacement wire glass features a dimpled pattern. These materials are used at door lights, transoms, some fire-hose cabinets, and interior windows.

The Rotunda floor originally featured thick sidewalk glass to bring light from the Rotunda down to the first floor. This feature has since been topped by terrazzo, although the iron supports are still visible at the first floor ceiling. It appears that the glass block was left in place and painted over where exposed on the Ground Floor ceiling.

Modern, compatible ornamental glass includes the leaded, beveled glass panels at the governors suite and the etched, beveled glass beehive-patterned door lights found throughout the building.

### 2) Analysis

Some of the original obscure glass has been replaced with an incompatible new material, and some has been painted out.

---

### 3) Recommendations

Preserve the Florentine glass in place. Carefully remove paint from lights that have been painted out. Find a suitable replacement material for new doors and any broken lights. Consider replacing the dimpled glass if a more compatible replacement material can be found.

Remove paint from the underside of the Rotunda light to determine whether any of the sidewalk glass remains in place. Restore the sidewalk glass by removing the terrazzo and adding a thickness of matching glass equaling the thickness of the removed glass. Remove the paint from the glass at the ceiling. If it proves infeasible to restore the Rotunda light, it may be possible to back-light the ceiling light at the first floor to create a skylight effect.



## H. WOOD

### 1) Background

As mentioned previously, The Capitol Commission's mandate to the architect was to design a "fire-proof building." Kletting had already had experience with this kind of design, as in his 1906 McIntyre Building constructed entirely of non-flammable materials. He was not able to be as "pure" in the Capitol because of the conflicting desire to have wood floors in such spaces as the Gold Room. Original drawings show that the hidden nailing block, window framing and windows also were of wood. There are also hardwood railings and rostrums in the House, Senate and Supreme Court Chambers. Among the woods used were mahogany, Circassian walnut, wormy chestnut, and white pine. The furnishings also were wood, some of it upholstered. Still, for the most part, Kletting succeeded in keeping interior wood to a minimum.

### 2) Analysis

The remaining original wood floors are of high quality, are in good condition, and are significant character-defining elements. The newer wood floors are of lower quality, eclectic design, and not preservation-worthy elements.

The hardwood rostrums, railings and occasional trim are in good condition and preservation-worthy. The wood window assemblies in the main building are gone.



### 3) Recommendations

During the renovation, protect, preserve and restore the original wood floors to match their original finishes and appearances. It is likely some or all of the floors may need to be temporarily removed, stored and later reinstalled. Follow the procedures described in section IX. D. 3. Take special care not to damage the brittle floors while removing them. Pre-removal documentation and numbering of elements is also essential.

Preserve the extant wood rostrums, railings and occasional trim, repairing any damaged or missing pieces with matching wood and finishes.

## I. PAINT/COATINGS

### 1) Background

The interior walls, ceilings, trim and ornament in its many types, sizes and styles of rooms were originally coated with a variety of materials and scores of different colors. Some of the original colors and finishes, including extensive gold leaf and metallic painting, remain. Some original finishes have been painted over with non-original colors or covered over entirely with modern materials such as paneling and wallpaper. In some areas, original colors were repainted to closely match the originals. In 1956, for example, a “nine color palette” was used to repaint the rotunda. In the same year, the Senate, House, Supreme Court and Gold Room were redecorated by cleaning, repainting and recovering the furniture.

### 2) Analysis

The team’s architectural conservators harvested 125 samples of original paint, gilding and related coatings from locations throughout the building. They then chemically analyzed them and matched them to Munsell paint chips to indicate the palette and locations of original colors used in the Capitol. This analysis is found in the following section X.

### 3) Recommendations

See section X regarding the historic interior finishes. The basic recommendation is to restore the finishes and colors to their original appearances.

## J. INTERIOR FURNITURE AND FURNISHINGS

### 1) Background

Concurrent with the original construction, a building-full of furniture and furnishings was designed or selected, manufactured and supplied to the Capitol. Records exist to document many of the original furnishings, which included desks, chairs and tables, couches, rugs, free-standing lamps and cabinets, and a myriad of related items needed for the building’s operation.

### 2) Analysis

Over the years, most of the furnishings have disappeared, probably because they became worn out, damaged

---

or obsolete. Significant exceptions include the original furniture in the Gold Room, the desks and benches in the Senate Chambers, some tables and chairs in the Supreme Court Chambers, and some individual pieces scattered throughout the building. Other pieces are known to have been sold or otherwise disposed of to legislators and other interested parties. The locations of some off-site pieces are known and it may be possible to obtain some of the furnishings which have left the building. Most of the original rugs, lamps, cabinets and non-furniture pieces no longer remain, or have been replaced with imitations such as the large carpet in the Gold Room.

The Capitol's replacement furniture is an eclectic assortment of pieces. Some of it dates from the early decades of the twentieth century but most is of recent vintage. Each agency or department has obtained its own furniture, so there is no building-wide consistency to furniture type or design.

Most of the extant furniture pieces have been labeled with numbers.

Unfortunately, no one to date has been able to locate the master inventory list which might document the age, source, and identity of the furniture pieces.

### 3) Recommendations

Engage a furnishings consultant to create a comprehensive inventory of all known original pieces, whether in or out of the building. Following a detailed architectural programming and space utilization study, create a furnishing plan showing what numbers, types and sizes of furnishings are needed in each space. The plan should indicate which period pieces may be retained and reused, and which of these require repair or restoration. An attempt should be made to acquire or obtain available furnishings not on site.

The furnishing consultant, working with state representatives, should determine the nature of new furnishings. Some may be accurate replicas such as were produced for the Texas State Capitol. Others may be contemporary pieces. A furnishings strategy and master plan documents should be developed to guide purchasing, placement, inventorying, monitoring, cleaning, repair and related furnishings processes.

An attempt should be made to better harmonize furnishing design and quality. Perhaps furniture acquisitions should be cleared for compatibility and appropriateness through the Capitol Preservation Board's conservator and/or furnishing's consultant.



